

Serial No.: 10/829,576
Examiner: S. Yam
Title: IMAGING APPARATUS WITH THREE DIMENSIONAL CIRCUIT BOARD

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An imaging apparatus comprising:

a three-dimensional circuit board transmitting virtually no visible light,
the three-dimensional circuit board comprising

a cylindrical barrel portion, and

a bottom portion;

a wiring pattern formed on a surface of the bottom portion of the three-dimensional circuit board opposite to the barrel portion;

a semiconductor imaging device that is bare-mounted on the wiring pattern and
held by the three-dimensional circuit board;

an optical system that is held by the barrel portion and directs light to
the semiconductor imaging device; and

a flexible printed circuit, disposed on the three-dimensional circuit
board on a side opposite to the barrel portion, for sending a signal to and
receiving a signal from the semiconductor imaging device;

wherein the flexible printed circuit entirely covers a surface of the
semiconductor imaging device opposite to a surface thereof facing the optical
system and a region of the flexible printed circuit facing the semiconductor
imaging device has sufficient shielding characteristics in a range sensitive to
light reception by the semiconductor imaging device.

2. (currently amended) The imaging apparatus according to claim 1, wherein the
semiconductor imaging device has a small thickness of 0.3 mm or smaller obtained by
grinding its back surface.

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3. (original) The imaging apparatus according to claim 1, wherein in the region of the flexible printed circuit facing the semiconductor imaging device, the shielding characteristics against light with a wavelength longer than a visible range is higher than that against light in the visible range.
4. (currently amended) The imaging apparatus according to claim 1, wherein a metal foil is laminated entirely on the region of the flexible printed circuit facing the semiconductor imaging device on a surface opposite to a surface facing the semiconductor imaging device.
5. (original) The imaging apparatus according to claim 4, wherein the metal foil contains aluminum as a main component.
6. (original) The imaging apparatus according to claim 4, wherein the metal foil contains silver or nickel as a main component.